

linium or an ion thereof, such as gadolinium(III). In some embodiments, the gadolinium is complexed with a chelating agent, such as DTPA.

Other variations are within the spirit of the present invention. Thus, while the invention is susceptible to various modifications and alternative constructions, certain illustrated embodiments thereof are shown in the drawings and have been described above in detail. It should be understood, however, that there is no intention to limit the invention to the specific form or forms disclosed, but on the contrary, the intention is to cover all modifications, alternative constructions, and equivalents falling within the spirit and scope of the invention, as defined in the appended claims.

The use of the terms “a” and “an” and “the” and similar referents in the context of describing the invention (especially in the context of the following claims) are to be construed to cover both the singular and the plural, unless otherwise indicated herein or clearly contradicted by context. The terms “comprising,” “having,” “including,” and “containing” are to be construed as open-ended terms (i.e., meaning “including, but not limited to,”) unless otherwise noted. The term “connected” is to be construed as partly or wholly contained within, attached to, or joined together, even if there is something intervening. Recitation of ranges of values herein are merely intended to serve as a shorthand method of referring individually to each separate value falling within the range, unless otherwise indicated herein, and each separate value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., “such as”) provided herein, is intended merely to better illuminate embodiments of the invention and does not pose a limitation on the scope of the invention unless otherwise claimed. No language in the specification should be construed as indicating any non-claimed element as essential to the practice of the invention.

Preferred embodiments of this invention are described herein, including the best mode known to the inventors for carrying out the invention. Variations of those preferred embodiments may become apparent to those of ordinary skill in the art upon reading the foregoing description. The inventors expect skilled artisans to employ such variations as appropriate, and the inventors intend for the invention to be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications and equivalents of the subject matter recited in the claims appended hereto as permitted by applicable law. Moreover, any combination of the above-described elements in all possible variations thereof is encompassed by the invention unless otherwise indicated herein or otherwise clearly contradicted by context.

All references, including publications, patent applications, and patents, cited herein are hereby incorporated by reference to the same extent as if each reference were individually and specifically indicated to be incorporated by reference and were set forth in its entirety herein.

What is claimed is:

1. A method of manufacturing a biopsy grid, the grid adapted to be arranged on a patient's skin to provide positioning information in a medical imaging procedure, the method comprising the steps of:

- a) combining at least one contrast agent with a hydrogel to form a mixture, the hydrogel providing sufficient tack to stick directly to a frame and the at least one contrast

agent visible in the medical imaging procedure, wherein the frame comprises a top and a bottom surface and a central opening;

- b) coating the mixture onto a carrier sheet in an uncured state;
- c) curing the mixture;
- d) cutting hydrogel strips after curing; and
- e) releasably attaching the hydrogel strips to opposite sides of the frame extending across the central opening of the frame so that, in use, the hydrogel strips can be moved by a medical technician from the frame, when the frame is attached to the patient's skin, so that an area underneath the hydrogel strips may be accessed to provide the positioning information without removing the frame from the patient's skin.

2. The method of claim 1, wherein the at least one contrast agent is selected from a radiopaque material or a material that is visible on an X-ray image.

3. The method of claim 2, wherein the radiopaque material comprises at least one material selected from the group consisting of tungsten, barium sulfate, calcium carbonate and iodine.

4. The method of claim 1, wherein the at least one contrast agent is a combination of materials such that the contrast agent is visible in an X-ray image, an MRI image and/or a CT image.

5. The method of claim 1, wherein the at least one contrast agent is selected from a paramagnetic material or a material visible in a magnetic resonance image (MRI).

6. The method of claim 5, wherein the paramagnetic material comprises at least one material selected from the group consisting of ferric chloride, ferric ammonium citrate and gadolinium.

7. The method of claim 1, further comprising a top sheet contacted to a top surface of the hydrogel strips.

8. The method of claim 1, wherein the frame comprises a support material selected from polyester, polypropylene, polyethylene, nylon, and paper.

9. The method of claim 1, further comprising an adhesive layer on the bottom of the frame for releasably adhering to the patient's skin.

10. The method of claim 9, further comprising a release liner extending over the adhesive layer.

11. The method of claim 10, wherein the release liner comprises a pull tab.

12. A method of imaging a tissue of interest, the method comprising:

- a) positioning the biopsy grid manufactured according to the steps of claim 1 on the patient's skin external to the tissue of interest; and
- b) observing the location of the biopsy grid relative to the tissue of interest by at least one of X-ray, CT scan, mammography, MRI or positron emission tomography.

13. The method of claim 12, further comprising:

- reversibly detaching the hydrogel strip from a location on the frame while the biopsy grid remains positioned against the patient's skin; and
- inserting a biopsy needle into the patient at the location where the detached hydrogel strip was previously located.

14. The method of claim 12, further comprising:

- reversibly removing a portion of the hydrogel strip from a location on the frame while the biopsy grid remains positioned against the patient's skin; and
- inserting a biopsy needle into the patient at the location where the portion of the hydrogel strip was previously located.